# Youth Violence in Montana

## Key Takeaways

- Montana's youth suicide rate is nearly three times the national rate, and the homicide rate is similar to the national rate.
- Nearly 2 in 3 suicides and 1 in 3 homicides among Montana youth involve firearms, usually owned by a family member.
- Youth suicide victims (especially males aged 15-17) who are most likely to use firearms may not exhibit visible risk patterns or have contact with screening programs.
- Drug poisonings account for most nonfatal self-harm injuries in youth, primarily over-the-counter medications and antidepressants.
- Youth homicide is highest among children age 0-4, and most victims are the child or step-child of the perpetrator

## Introduction

Violence is an urgent public health problem that takes many forms, including intimate partner violence, sexual violence, child maltreatment, bullying, and suicidal behavior. Research has shown that different forms of violence are strongly interconnected and that childhood exposure to violence and other traumatic stressors, including Adverse Childhood Experiences (ACEs), can have cumulative and serious long-term effects.[1]

Approximately 1 in 4 Montana youth aged 0-17 have experienced two or more ACEs (22.6%), which is the second highest in the United States.[2] Montana is frequently listed as having the highest or near-highest youth suicide rate in the nation,[3] at almost triple the national rate.[4] Among children and young adults aged 0-24 years, homicide was ranked as the fifth leading cause of death in Montana and the third leading cause nationally in 2023.[5,6] While Montana's youth homicide rate is similar to the national rate,[3] recent Youth Risk Behavior Survey (YRBS) results indicate that Montana has elevated rates of bullying (25%) and sexual violence (14%) compared to the US (19%, 11%).[7,8]

This report describes fatal and nonfatal violence among youth aged 0-17 years in Montana from 2009 to 2024, using available data from the Montana Violent Death Reporting System (MT-VDRS), Montana Office of Vital Statistics (OVS), Montana Hospital Discharge Data System (MHDDS), and national surveillance systems.

## Methods

### Data Sources

Fatalities occurring from 2009-2024 were assessed using OVS death certificate data,[9] including Montana residents aged 0-17 years regardless of death location, with an ICD-10 underlying cause of death code of suicide or homicide.[10] Additional data on suicide and homicide risk factors were taken from 2019-2023 MT -VDRS data,[11] where the fatal injury occurred in Montana regardless of residency or death location. MT-VDRS collects information about circumstances surrounding violent deaths

from coroner/medical examiner (CME), law enforcement (LE), and toxicology reports which provide crucial context beyond the basic information available on the death certificate.

Nonfatal violent injuries occurring from 2016-2024 were assessed using MHDDS data on nonfatal emergency department (ED) visits and hospitalizations related to self-harm and assault among Montana residents aged 0-17 years.[10,12] ED visit data excludes those that result in hospitalization. MHDDS data prior to 2016 was not included due to the ICD-9-CM to ICD-10-CM coding system transition that occurred on October 1, 2015.

## Statistical Analysis

Rates are presented per 100,000 (i.e., 100k) resident population. All rates are age-adjusted except for rates by age group. Age-adjustment is a statistical process applied to rates of health events that allows populations with different age structures to be compared. Age-adjusted rates were calculated using direct standardization to the 2000 U.S. standard population.[13] Rates for years 2020 and prior used bridged-race population estimates from the National Center for Health Statistics (NCHS).[14] Years 2021 and later used single race population estimates from the Montana Census and Economic Information Center (CEIC).[15] Single race estimates introduced a multi-racial category, resulting in a 38% reduction from 2020 to 2021 in the estimated population of Black Montanans, and an 8% reduction for American Indian or Alaska Native (AI/AN) Montanans. Cases documented as multi-racial prior to 2021 were re-coded to an “Other” race category and not included in any rate numerator. Race-specific rates spanning 2020-2021 should be interpreted with this in mind.[16]

95% confidence intervals (CI) are provided to convey statistical uncertainty. CIs for rates based on counts 100 and greater were calculated using the normal distribution, and CIs for rates based on counts less than 100 were calculated using the chi-squared distribution.[17] Data is suppressed according to departmental policy.[18]

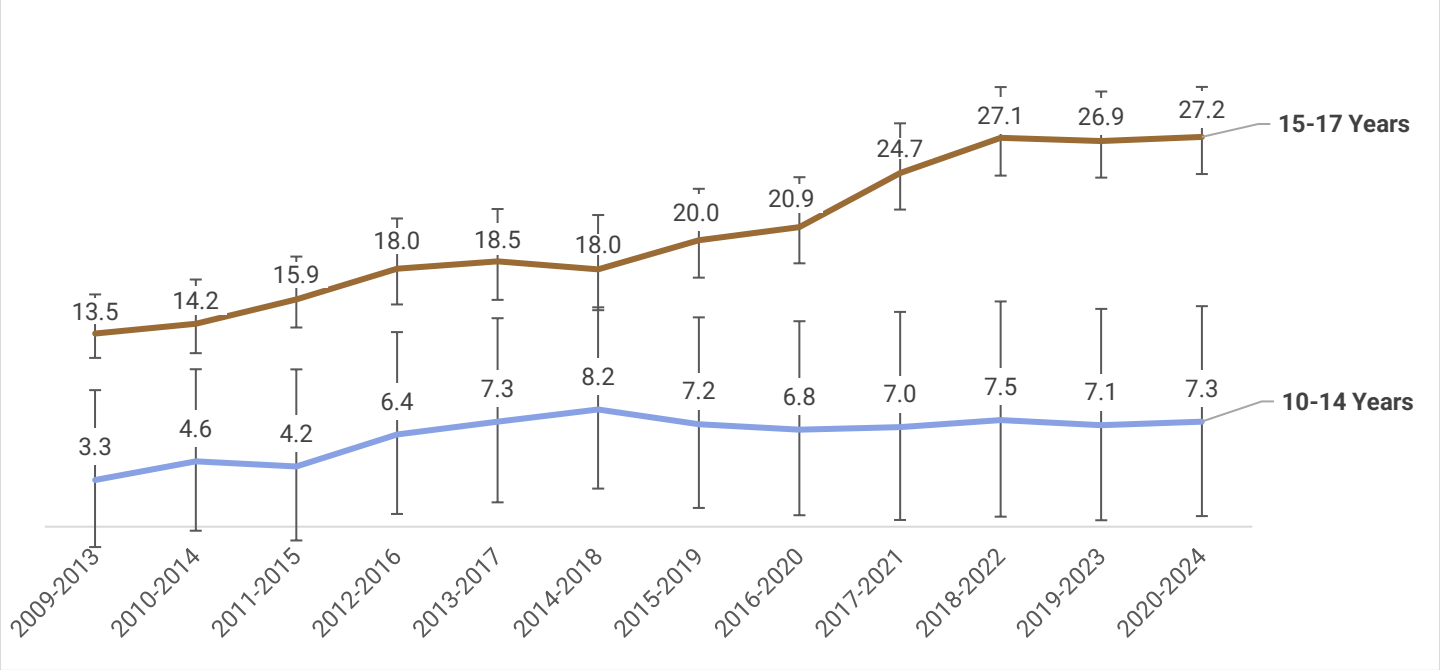
Latent class analysis (LCA) was used to identify patterns of co-occurring circumstances and suicide methods among victims with circumstance data available in MT-VDRS. To reduce sparsity, individual MT-VDRS circumstance variables representing related constructs were collapsed into binary indicators coded as ‘present’ if any constituent variable was present. Candidate models were estimated with two to five classes, requiring replication of the maximum log-likelihood to ensure model identification, and the optimal number of classes within each model was determined using the lowest Bayesian Information Criteria (BIC). Measurement invariance was evaluated using likelihood ratio difference tests.[19]

# Suicide

## Trends

From 2009–2024, a total of 190 suicide deaths occurred among children aged 10-17 years. There were no suicides among children under the age of 10 years. Nearly 60% of the victims used firearms (N=113). The suicide rate among Montana youth has increased steadily over the past decade, especially among teens 15-17 years old (Figure 1). For more information, refer to the recent surveillance report Suicide among Children in Montana, 2013-2022 published by the Montana Vital Statistics Analysis Unit.

*Figure 1. Age-specific youth suicide rates per 100k residents, Montana, 2009-2024 (5-year combined rates)*



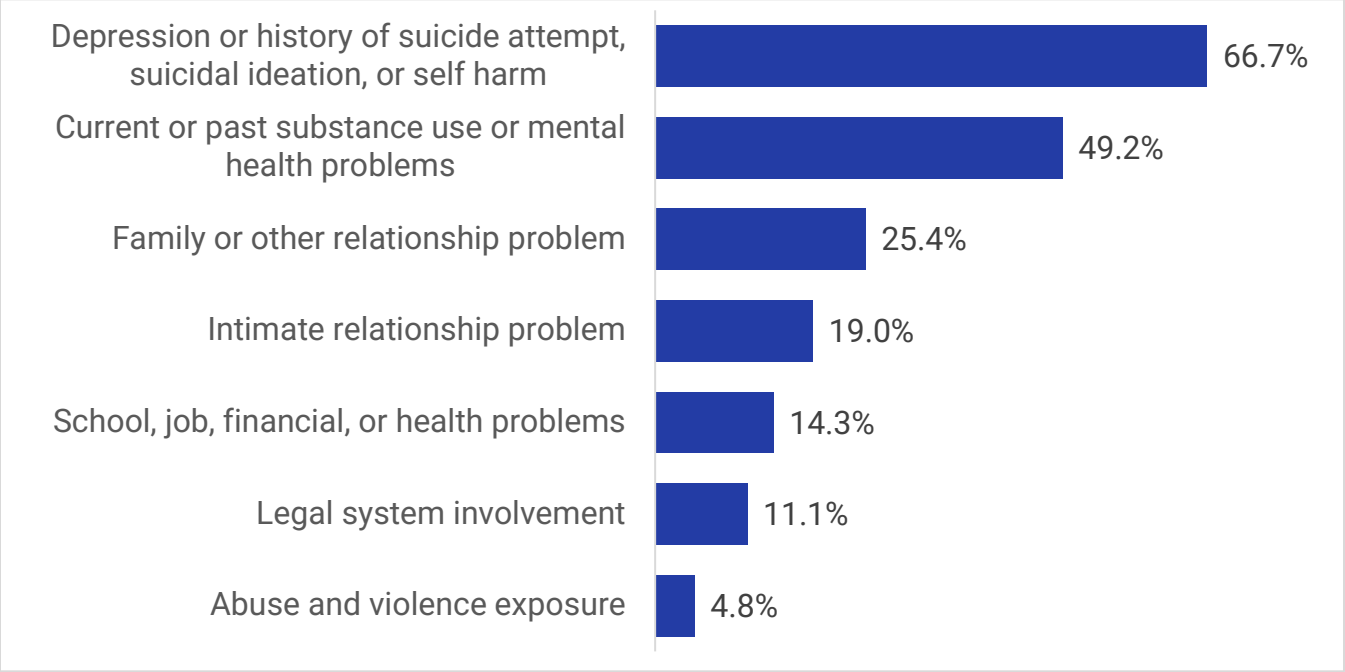

*Footnote: 95% confidence intervals are shown.*

## Risk Profiles of Youth Suicide Victims

There were 76 youth suicides included in MT VDRS from 2019-2023. Firearms were the most common suicide method, accounting for 62% of deaths (N=47). Thirty percent (N=23) died by hanging, and 8% died by other methods such as poisoning. Of the 47 firearm-related suicides, it was confirmed that the firearm was stored unlocked and loaded in 51% of cases, and that the parent or another family member was the owner of the firearm in 57% of cases.

MT-VDRS collected circumstantial data for 83% of youth suicide victims (N=63), revealing that 22% of suicide victims disclosed their thoughts and/or plans within the last month to another person, most commonly a friend or intimate partner. Figure 2 shows the proportion of suicide victims with documentation of selected circumstances.

*Figure 2. Overall proportion of youth suicide victims with circumstances documented, MT VDRS, 2019-2023*

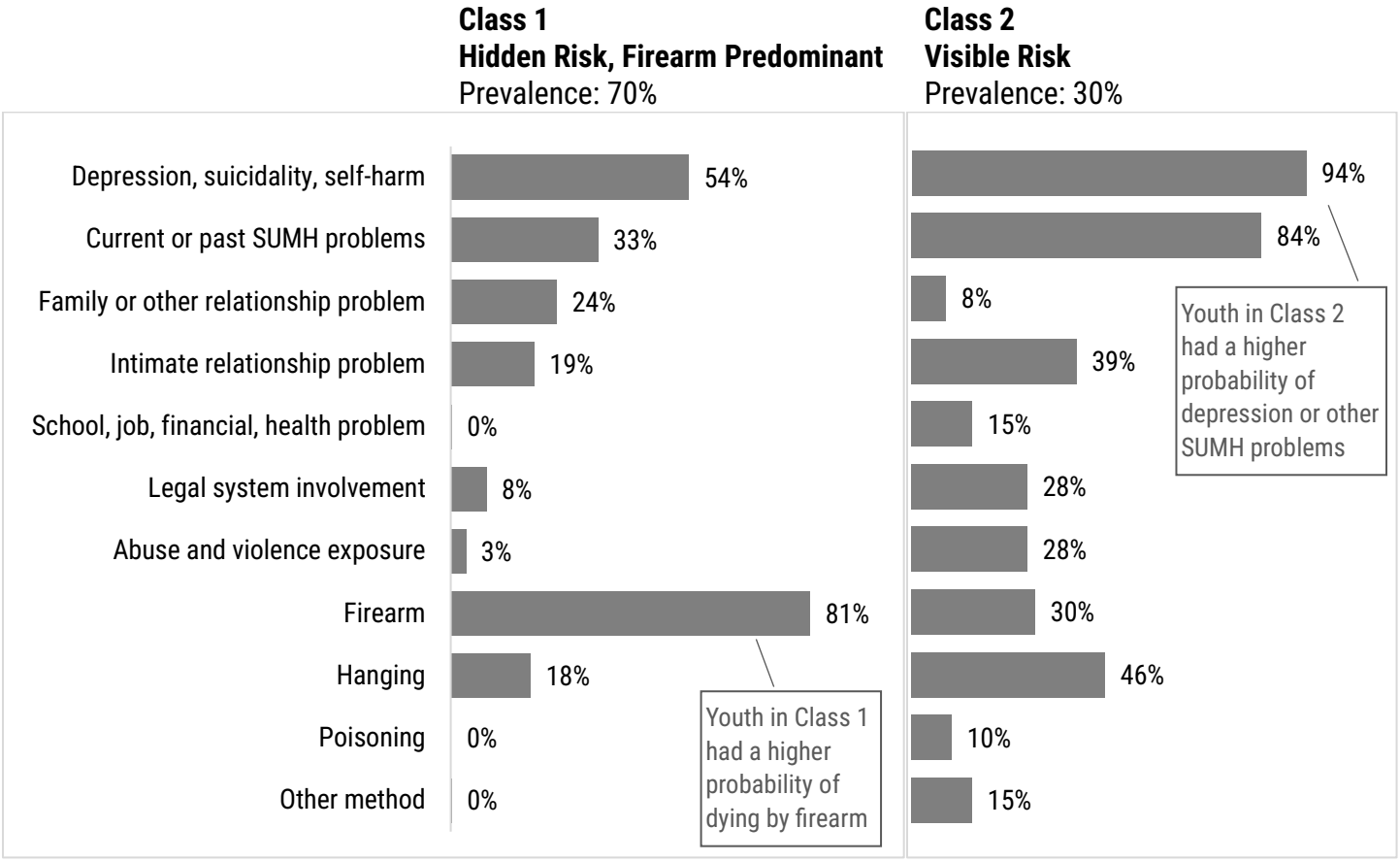



*Footnote: Percentages use N=63 as denominator (has circumstance data available)*

Two distinct risk profiles (co-occurring patterns of circumstances) were identified using LCA modeling techniques (Figure 3). Class 1, labeled “hidden risk, firearm predominant”, was characterized by lower percentages of most psychosocial stressors, and a high percentage of firearm use (81%). Class 2, labeled “visible risk”, had very high percentages of depression, suicidal ideation, suicide attempts, or self-harm (94%), as well as substance use and mental health (SUMH) problems (84%), along with relatively higher percentages of other psychosocial stressors compared to Class 1. Class 2 had higher percentages of non-firearm suicide methods such as hanging (45%), compared to Class 1.

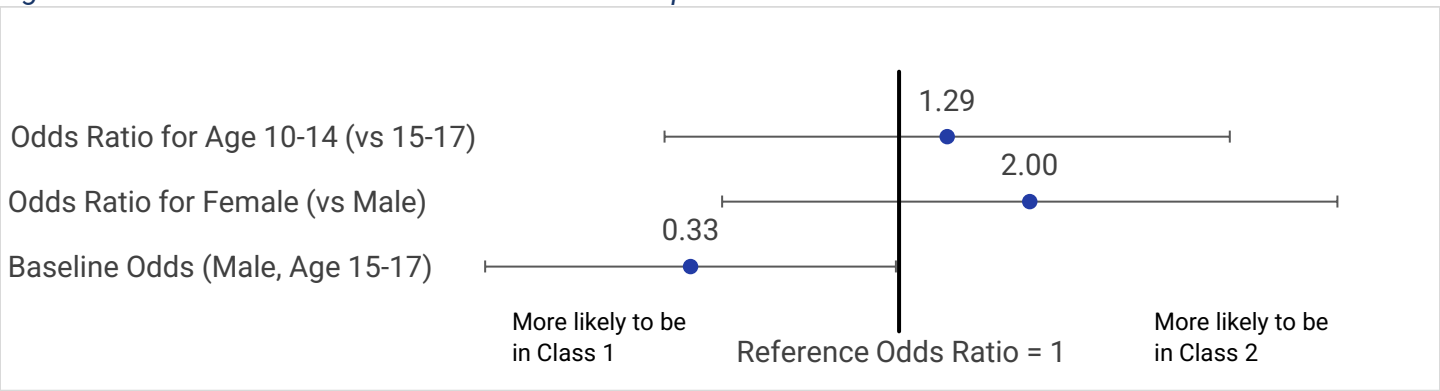
Overall, Class 1 (hidden risk, firearm predominant) comprised 70% of youth and Class 2 (visible risk) comprised 30%. Males aged 15-17 years had three times the odds of being in Class 1 versus Class 2, while females had two times the odds of being in Class 2 versus Class 1 compared to males (regardless of age), and youth aged 10-14 years had slightly higher odds of being in Class 2 versus Class 1 compared to those aged 15-17 (regardless of sex) (Figure 4).

*Figure 3. Youth suicide decedent risk profiles, MT-VDRS, 2019-2023*




*Footnote: Bar chart percentages depict the probability that someone in a class shows a given characteristic. SUMH = substance use and mental health*

*Figure 4. Factors associated with odds of membership in Class 1 versus Class 2*



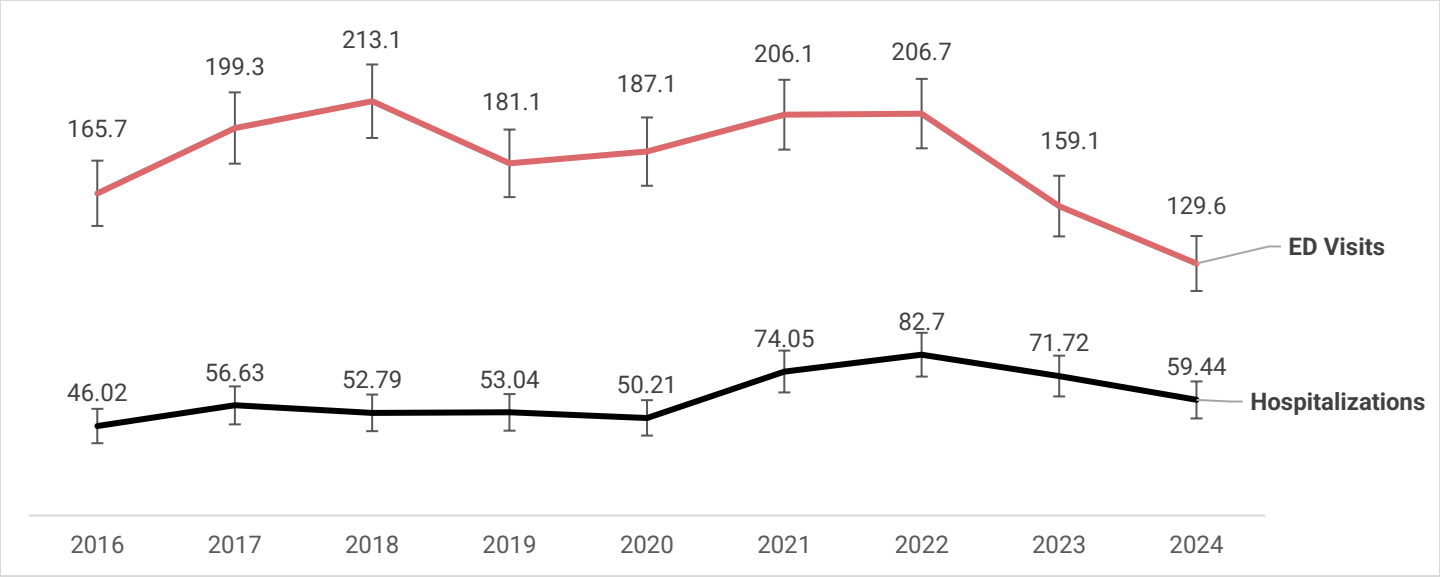

*Footnote: Odds ratios <1 indicate higher odds of Class 1 vs Class 2 membership, while odds ratios >1 indicate higher odds of Class 2 vs Class 1 membership. 95% confidence intervals are shown. Confidence intervals crossing the reference line are not statistically significant.*

# Nonfatal Self-Harm

## Trends

From 2016-2024, there were 3,914 nonfatal self-harm related ED visits and 1,312 hospitalizations among youth aged 0-17 years. The rate of self-harm hospitalizations increased during 2020–2022 By contrast, the rate of self-harm related ED visits has fluctuated but declined in recent years (Figure 5).

*Figure 5. Age-adjusted nonfatal youth self-harm hospitalizations and ED visits per 100k residents, Montana, 2016-2024*




*Footnote: Youth includes ages 0-17 years. 95% confidence intervals shown. ED visits exclude those that result in hospitalization.*

Drug poisonings accounted for 56% of self-harm related ED visits and 93% of hospitalizations (Figure 6). Over-the-counter pain medications (such as acetaminophen, ibuprofen, and aspirin) were the most common type of drug, followed by antidepressants (Table 1)

*Figure 6. Injury mechanisms of nonfatal youth self-harm ED visits and hospitalizations, Montana, 2016-2024*

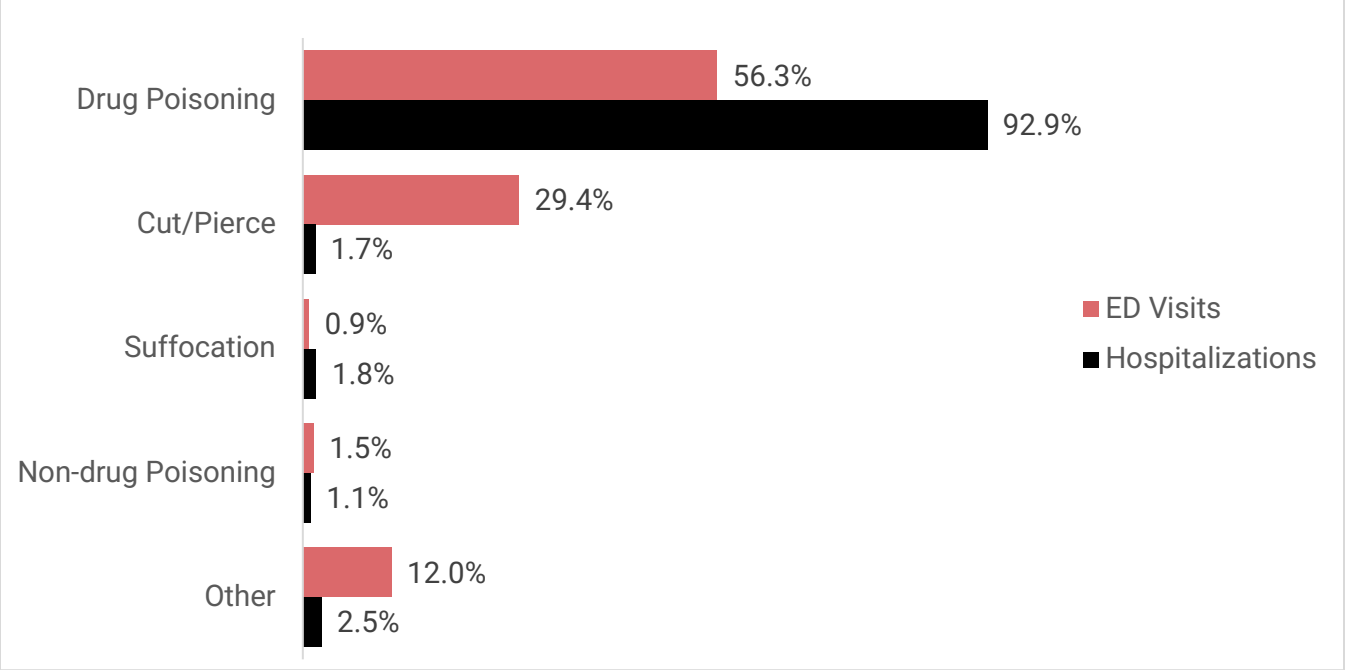



*Table 1.Types of drugs involved in nonfatal youth self-harm related drug poisonings, Montana, 2016-2024*

| | ED Visits | | Hospitalizations | | All | |
|---|---|---|---|---|---|---|
| **Drug Category** | **N** | **%** | **N** | **%** | **N** | **%** |
| Over-the-counter pain medications | 694 | 31.5% | 452 | 37.1% | 1,146 | 33.5% |
| Antidepressants | 449 | 20.4% | 231 | 18.9% | 680 | 19.9% |
| Other | 480 | 21.8% | 189 | 15.5% | 669 | 19.6% |
| Common household medications | 206 | 9.4% | 116 | 9.5% | 322 | 9.4% |
| Antipsychotics | 185 | 8.4% | 119 | 9.8% | 304 | 8.9% |
| Sedatives/Anxiolytics | 99 | 4.5% | 71 | 5.8% | 170 | 5.0% |
| Stimulants | 43 | 2.0% | 31 | 2.5% | 74 | 2.2% |
| Opioids | 46 | 2.1% | 10 | 0.8% | 56 | 1.6% |
| **Total** | **2,202** | **100.0%** | **1,219** | **100.0%** | **3,421** | **100.0%** |

*Footnote: This table summarizes only the first listed code related to intentional self-harm drug poisonings, therefore cases involving multiple substances may not be fully represented. "Common household medications" include non-analgesic, over-the-counter or easily accessible medications such as allergy medications, cold and cough remedies, antacids, etc.*

## Demographics

Table 2 summarizes patterns of nonfatal self-harm by demographic factors from 2020-2024. Adolescents ages 15–17 experience the highest burden of nonfatal self-harm related hospitalizations and ED visits. Nonfatal self-harm rates by race should be interpreted cautiously due to the high proportion of missing data.

*Table 2. Nonfatal youth self-harm hospitalizations and ED visits by demographics, Montana, 2020-2024*

| | ED Visits | | | Hospitalizations | | |
|---|---|---|---|---|---|---|
| | **N** | **%** | **Rate (95% CI)** | **N** | **%** | **Rate (95% CI)** |
| **Total** | **2,181** | **100.0%** | **177.3 (169.9-184.8)** | **836** | **100.0%** | **67.9 (63.3-72.5)** |
| Age | | | | | | |
| 0-4 Years | 7 | 0.3% | 2.4 (1.0-5.0) | 0 | 0.0% | 0.0 |
| 5-9 Years | 16 | 0.7% | 4.9 (2.8-7.9) | 2 | 0.2% | ‡ |
| 10-14 Years | 964 | 44.2% | 282.9 (265.1-300.8) | 350 | 41.9% | 102.7 (92.0-113.5) |
| 15-17 Years | 1,194 | 54.7% | 569.9 (537.5-602.2) | 484 | 57.9% | 231.0 (210.4-251.6) |
| Sex | | | | | | |
| Male | 484 | 22.2% | 76.0 (69.2-82.8) | 170 | 20.3% | 26.6 (22.6-30.6) |
| Female | 1,697 | 77.8% | 285.0 (271.5-298.6) | 666 | 79.7% | 111.7 (103.2-120.1) |
| Race | | | | | | |
| White | 1,141 | 52.3% | 111.3 (104.9-117.8) | 459 | 54.9% | 44.7 (40.6-48.8) |
| Black | 28 | 1.3% | 260.5 (173.1-376.9) | 21 | 2.5% | 194.0 (120.1-297.1) |
| AI/AN | 236 | 10.8% | 184.8 (161.2-208.4) | 95 | 11.4% | 74.4 (60.2-91.0) |
| Asian/NHOPI | 10 | 0.5% | 77.2 (37.0-143.2) | 6 | 0.7% | 45.2 (16.6-100.1) |
| More than one race/Other | 84 | 3.9% | N/A | 37 | 4.4% | N/A |
| Missing Race | 682 | 31.3% | N/A | 218 | 26.1% | N/A |
| Sex and Race | | | | | | |
| White Male | 270 | 12.4% | 50.7 (44.6-56.7) | 100 | 12.0% | 18.7 (15.0-22.4) |
| White Female | 871 | 39.9% | 176.1 (164.4-187.8) | 359 | 42.9% | 72.5 (65.0-80.0) |
| AI/AN Male | 44 | 2.0% | 67.5 (49.0-90.8) | 16 | 1.9% | 24.5 (14.0-40.1) |
| AI/AN Female | 192 | 8.8% | 307.5 (264.0-351.0) | 79 | 9.4% | 126.5 (100.1-157.9) |

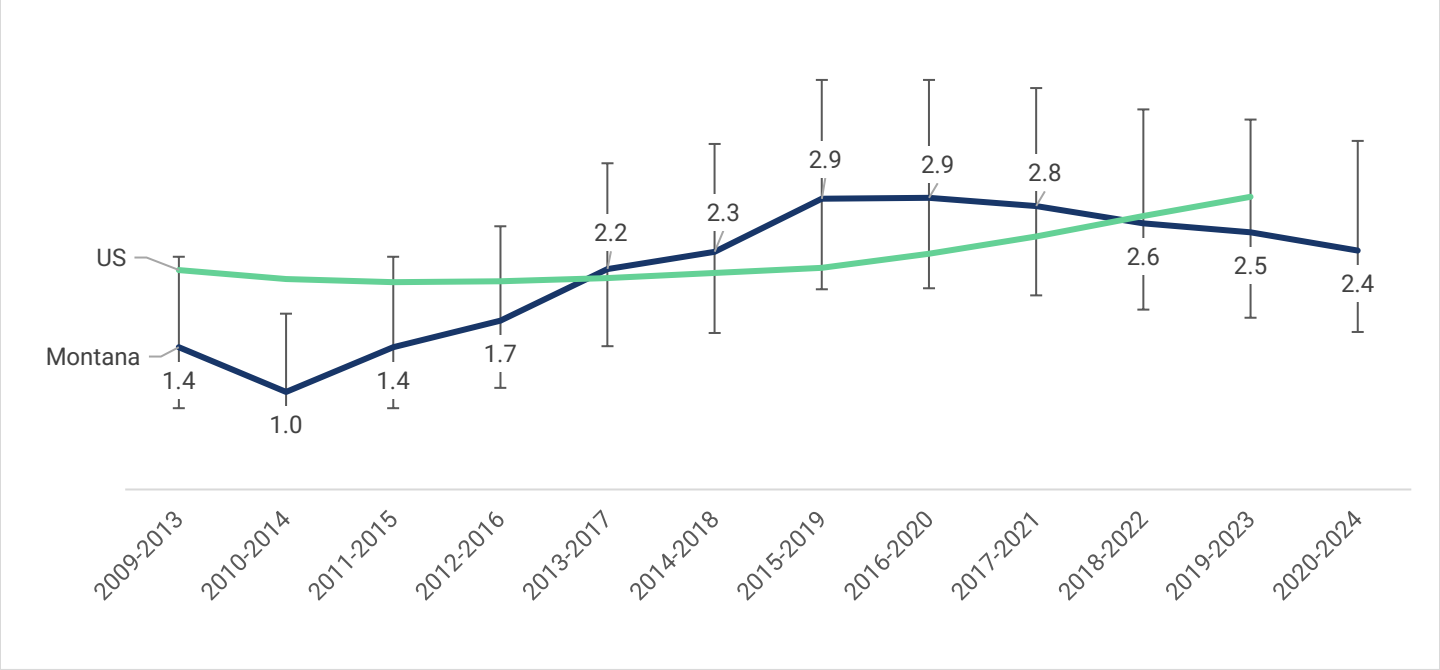
*Footnote: All rates are per 100k residents. ‡ denotes suppressed rate due to N<5. Rates by race should be interpreted cautiously due to high percentages of missing data and lack of population data for certain groups. All rates are age-adjusted except for rates by age group. 95% confidence intervals are shown.*

# Homicide

## Trends

From 2009-2024, a total of 77 homicide deaths occurred among children ages 0–17 in Montana. One-third of the deaths (32%) involved firearms (N=25), and one third of the deaths (38%) were related to abuse, maltreatment, neglect or unspecified blunt force trauma (N=29). The age-adjusted rate of homicide deaths among Montana youth age 0-17 is similar to that of the U.S. (Figure 7).

*Figure 7. Youth homicide rate per 100k residents, Montana vs US, 2009-2024 (5-year combined rate)*

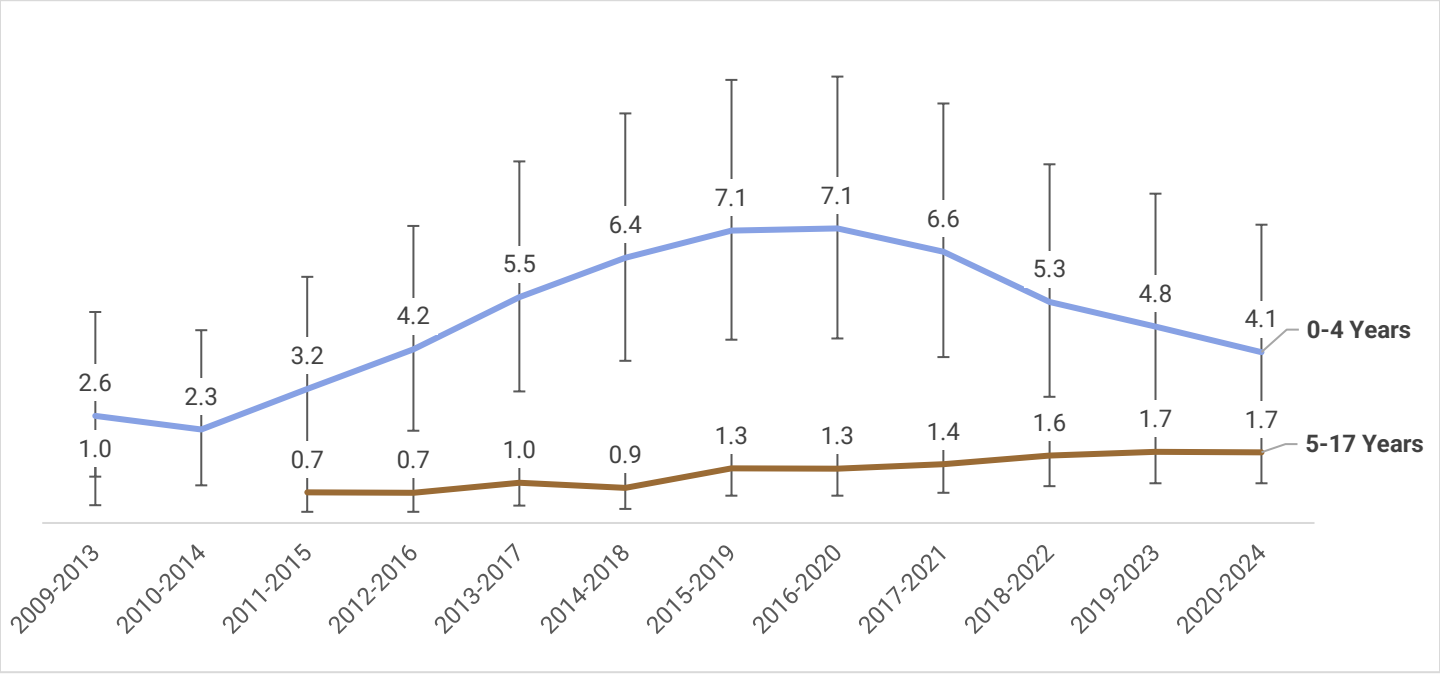



*Footnote: Youth includes ages 0-17 Years. US rates are crude rates and do not include confidence intervals. US data was not available for 2020-2024. Montana rates are age-adjusted rates and include 95% confidence intervals.*

## Demographics

Over half (56%) of youth homicide deaths from 2009–2024 occurred among children aged 0–4 years, and the homicide rate among this age group is consistently higher than among older youth (Figure 8).

*Figure 8. Age-specific youth homicide rates per 100k residents, Montana, 2009-2024 (5-year combined rates)*



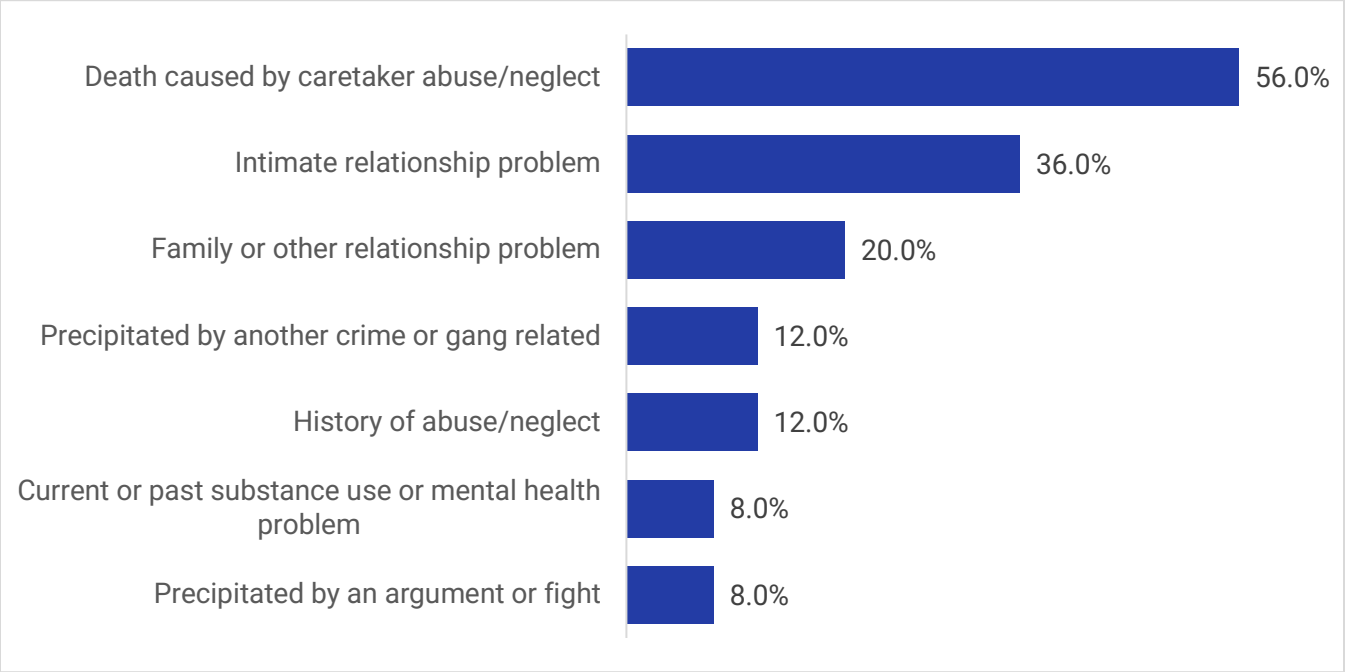

*Footnote: 95% confidence intervals are shown. The rate among 5-17 Year olds for 2010-2014 was suppressed due to N<5.*

Montana's small numbers make it challenging to draw definitive conclusions about differences in homicide across demographic groups. Male victims accounted for 58% of homicides from 2009-2024, and the homicide mortality rate was similar between males and females. White victims accounted for 67% of homicides and AI/AN victims accounted for 23% from 2009-2024.

## Circumstances of Youth Homicide Victims

There were 27 youth homicides included in MT VDRS from 2019-2023. Firearms were the most common weapon used, accounting for 37% of deaths (N=10), followed by sharp or blunt instruments (22%), and personal weapons (15%). MT-VDRS was able to collect circumstantial data from CME or LE reports for 92.6% of victims (N=25), adding valuable context beyond what is reported on a death certificate. This data revealed that 70% of the victims (N=19) were a child or stepchild of the homicide perpetrator. There was not documentation of a prior child protective services (CPS) report for any of the victims within MT-VDRS. Figure 9 shows the proportion of victims with documentation of selected circumstances.

*Figure 9. Proportion of youth homicide victims with circumstances documented, MT-VDRS, 2019-2023*



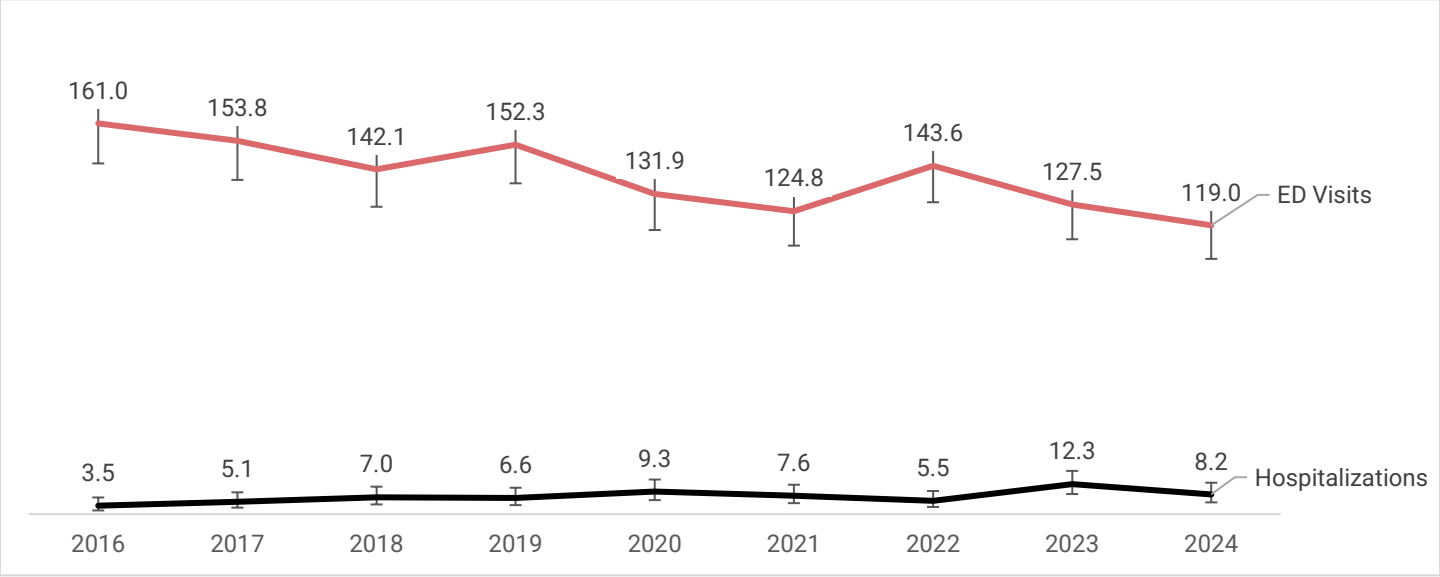

*Footnote: Percentages use N=25 as denominator (has circumstance data available)*

## Nonfatal Assault

### Trends

From 2016-2024, there were 2,937 nonfatal assault related ED visits and 150 hospitalizations among youth aged 0-17 years. Since 2016, the rate of ED visits for nonfatal assault have decreased, while hospitalizations have increased (Figure 10).

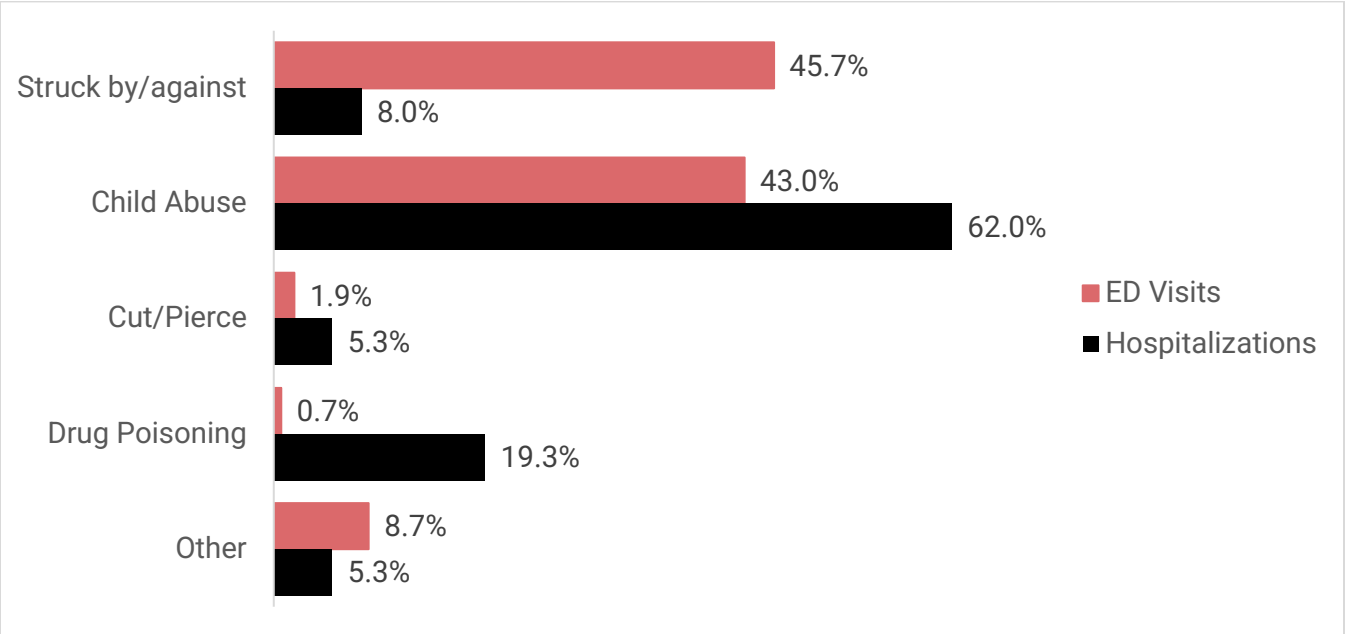
*Figure 10. Age-adjusted nonfatal youth assault hospitalizations and ED visits per 100k residents, Montana, 2016-2024*




*Footnote: Youth includes ages 0-17 years. 95% confidence intervals shown. ED visits exclude those that result in hospitalization.*

Child abuse accounted for 43% of assault related ED visits and 62% of hospitalizations (Figure 11). 46% of ED visits for assault were related to being struck by (hit) or crushed by a human, animal, or inanimate object or force other than a vehicle or machinery.

*Figure 11. Injury mechanisms of nonfatal youth assault ED visits and hospitalizations, Montana, 2016-2024*



## Demographics

Table 3 summarizes patterns of nonfatal assault by demographic factors from 2020-2024. The highest rates of nonfatal ED visits are among 15–17-year-olds, with hospitalizations being highest among children aged 0-4 years. Nonfatal ED visits are higher among females; hospitalizations are similar by sex. Nonfatal assault rates by race should be interpreted cautiously due to the high proportion of missing data.

*Table 3. Nonfatal youth assault hospitalizations and ED visits by demographics, Montana, 2020-2024*

| | ED Visits | | | Hospitalizations | | |
|---|---|---|---|---|---|---|
| | **N** | **%** | **Rate (95% CI)** | **N** | **%** | **Rate (95% CI)** |
| **Total** | **1,544** | **100.0%** | **129.3 (122.9-135.8)** | **99** | **100.0%** | **8.6 (7.0-10.5)** |
| Age | | | | | | |
| 0-4 Years | 294 | 19.0% | 101.2 (89.6-112.7) | 48 | 48.5% | 16.5 (12.2-21.9) |
| 5-9 Years | 189 | 12.2% | 57.6 (49.4-65.8) | 4 | 4.0% | ‡ |
| 10-14 Years | 414 | 26.8% | 121.5 (109.8-133.2) | 25 | 25.3% | 7.3 (4.8-10.8) |
| 15-17 Years | 647 | 41.9% | 308.8 (285.0-332.6) | 22 | 22.2% | 10.5 (6.6-15.9) |
| Sex | | | | | | |
| Male | 666 | 43.1% | 108.1 (99.8-116.3) | 46 | 46.5% | 8.0 (5.8-10.6) |
| Female | 878 | 56.9% | 151.8 (141.8-161.9) | 53 | 53.5% | 9.3 (7.0-12.2) |
| Race | | | | | | |
| White | 742 | 48.1% | 74.8 (69.4-80.1) | 43 | 43.4% | 4.5 (3.3-6.1) |
| Black | 27 | 1.7% | 247.9 (163.3-361.3) | 2 | 2.0% | ‡ |
| AI/AN | 246 | 15.9% | 195.9 (171.4-220.4) | 24 | 24.2% | 19.7 (12.6-29.5) |
| Asian/NHOPI | 4 | 0.3% | ‡ | 1 | 1.0% | ‡ |
| More than one race/Other | 81 | 5.2% | N/A | 7 | 7.1% | N/A |
| Missing Race | 444 | 28.8% | N/A | 22 | 22.2% | N/A |
| Sex and Race | | | | | | |
| White Male | 332 | 21.5% | 64.3 (57.4-71.2) | 17 | 17.2% | 3.7 (2.1-5.9) |
| White Female | 410 | 26.6% | 85.8 (77.5-94.1) | 26 | 26.3% | 5.5 (3.6-8.0) |
| AI/AN Male | 100 | 6.5% | 156.9 (126.1-187.7) | 12 | 12.1% | 19.7 (10.2-34.6) |
| AI/AN Female | 146 | 9.5% | 236.6 (198.2-275.0) | 12 | 12.1% | 19.9 (10.2-34.9) |

*Footnote: All rates are per 100k residents. ‡ denotes suppressed rate due to N<5. Rates by race should be interpreted cautiously due to high percentages of missing data and lack of population data for certain groups. All rates are age-adjusted except for rates by age group. 95% confidence intervals are shown.*

# Discussion

## Limitations

VDRS circumstance data is limited to information available in coroner/medical examiner and law enforcement reports. Although no prior CPS reports were documented for homicide victims in MT-VDRS data, this likely represents a gap in reporting rather than an absence of CPS involvement, as such details may not be included in source documents.

# Conclusion

Nearly two in three youth suicide victims in Montana used firearms. Drug poisonings – most often over-the-counter medications and antidepressants – drove the majority of nonfatal self-harm injuries requiring emergency or inpatient care. Latent class analysis indicated that most youth suicide victims, particularly males aged 15-17 years, fall into a "hidden risk" firearm-predominant profile. Over half of youth homicide deaths in Montana occurred among children aged 0-4 years, mostly involving firearms and abuse, maltreatment, neglect or unspecified blunt force trauma. Nonfatal assault injuries were mainly driven by striking/hitting and child abuse. These patterns occur in the context of high mental health needs and limited system capacity. More than one in four Montana high school students seriously considered attempting suicide and one in four had been bullied on school property in the past year,[7] while most of Montana's 56 counties are designated mental health professional shortage areas and face substantial behavioral health workforce limitations.[20,21]

These findings suggest that prevention must extend beyond traditional settings or models.[21] Youth at highest risk of firearm-related suicide may have little contact with screening or behavioral health systems, limiting opportunities for intervention through care-based approaches alone. Expanding safe firearm storage practices is critical, particularly given that 30% of Montana firearm-owning adults living with youth report an unlocked firearm in the home. Heightened medication safety in the home is also a critical safety measure.

## Prevention

Preventing youth violence in Montana requires a comprehensive approach that addresses risks across individual, family, community, and system levels. Surveillance findings consistently demonstrate the need for earlier intervention, improved access to care, and strategies that reduce exposure to lethal means and violence before harm occurs. Montana has implemented several key prevention efforts, but opportunities remain to strengthen and expand them.

**Suicide and Self-Harm**

- 988 is a 24/7 suicide prevention and mental health crisis lifeline that provides access to trained crisis counselors via call, text, or chat. 988 offers immediate support for individuals experiencing suicidal ideation, emotional distress, or mental health crises, and serves as a critical entry point to local crisis response and behavioral health services.
- DPHHS' website offers many resources on suicide prevention and crisis systems.https://dphhs.mt.gov/suicideprevention/suicideresources
- The United States Preventive Services Task Force recommends screening for anxiety in children ages 8 to 18 years, and for depression in adolescents ages 12 to 18 years.
- School-based environmental interventions that focus on improving coping and resiliency skills in young children and adolescents, such as PAX Good Behavior Game or YAM (Youth Aware of Mental Health).
- Lethal means counseling (LMC) for kids is an evidence-based, collaborative intervention where healthcare providers work with parents/guardians of youth at risk of suicide to temporarily remove or safely secure dangerous items in the home, such as firearms and medications
- Montana VDRS compiles contextual information about every suicide to guide prevention.

**Homicide and Assault**

- Montana Children's Advocacy Centers are community locations that serve children who are victims of abuse, providing coordinated forensic interviews, referrals, and support services to reduce trauma and improve investigation outcomes.
- DPHHS' website offers parenting resources as well as information about Community Response Programs (CRPs) which are voluntary 8-to-16-week programs designed to engage families with children before the family is in crisis.
- Safer Communities Montana offers free gun locks and drug disposal bags to reduce suicide and unintentional injury risk, which also helps address violence and lethality in households.

## References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